

## **FINDING OF NO SIGNIFICANT IMPACT**

### **Aerial Operations Plan**

**Lake Mead National Recreation Area**

**Clark County, Nevada**

**Mohave County, Arizona**

## **INTRODUCTION**

The National Park Service (NPS) at Lake Mead National Recreation Area (NRA), and its cooperating agencies, including the Nevada Department of Wildlife (NDOW), Arizona Game and Fish Department (AGFD), the Bureau of Reclamation (BOR), and the Bureau of Land Management (BLM), have prepared an environmental assessment for the use of fixed-wing and helicopter flights for a variety of ongoing, essential functions. Some of these operations would occur over or within designated, suitable, or potential wilderness areas within the recreation area. The environmental assessment (EA) evaluated the potential effects of aerial operations over and within wilderness and backcountry areas throughout the NRA.

## **PURPOSE AND NEED**

As a key part of their ongoing land management programs, the NPS, in coordination with state management agencies and cooperators, jointly conduct aerial operations necessary for essential land and resource management functions within the recreation area. Some of these operations are likely to occur within or near designated, suitable, and potential wilderness areas at Lake Mead NRA and within the NRA portion of the Grand Canyon-Parashant National Monument (NM). In the past, the evaluation of flights in wilderness has been conducted on a case-by-case basis. However, so as to more readily assess the potential for cumulative effects, and to allow for more comprehensive project planning and public notification, an EA was prepared to address all foreseeable park-wide aerial operations concurrently for the next year.

The proposed administrative flights are necessary to accomplish the following:

1. Essential patrol function, including wilderness monitoring and poaching interdiction
2. Repair and maintain existing radio towers
3. Restoration of North Pipe Springs
4. Wildlife monitoring and removal activities
5. Native fish aerial surveys
6. Rehabilitation and mine closures at Dupont and Homestake Mines

The underlying purpose of these programs and projects is to provide for visitor and employee safety and health, to manage wildlife populations, and to monitor, rehabilitate, and preserve wilderness resources set in the context of the laws, regulations, and policies governing park management. The proposed helicopter and fixed-wing flights would allow park staff and cooperators to accomplish these remote area activities in a safe, timely, and efficient manner.

## **ALTERNATIVES CONSIDERED**

The EA evaluated the effects of the no action alternative (Alternative A), and the National Park Service preferred alternative to Conduct Administrative Helicopter and Fixed-Wing Flights in 2004(Alternative B). The EA included a minimum requirement analysis for activities proposed in Wilderness areas.

Under the no action alternative, no new aerial operations would be permitted to occur over wilderness areas. This alternative does not meet the project objectives to provide for visitor and employee health and safety, to protect sensitive resources, to manage wildlife populations, and to monitor, rehabilitate, and preserve wilderness resources set in the context of the laws, regulations, and policies governing park management.

Alternative B is the management-preferred alternative. The preferred alternative constitutes the proposed action.

### **Continue Fixed-Wing Aerial Patrols (2 flights per week/maximum 104 flights per year, excluding emergencies)**

Fixed-wing aerial patrols are conducted by the NPS Park Pilot at least two times a week, in accordance with the Lake Mead NRA Aerial Operations Plan. The purposes of the flights are routine law enforcement patrol, backcountry patrol, damage assessment patrols, employee transportation, search and rescue, boat counts, employee-requested flights, wildlife monitoring, and special request flights. These flights are primarily between 800 to 1,000 feet above ground level, though could go as low as 700 feet above ground level for optimum viewing.

### **Perform Radio Tower Maintenance (2 flights per site year/maximum 8 flights per year total, excluding emergencies)**

Efficient communication among park personnel is considered essential for safety and emergency services. When there is a need to repair radio towers and replace tower batteries, this work must be completed immediately. NPS radio towers require frequent maintenance and servicing. On average, each radio tower is serviced twice a year, unless emergency maintenance is required.

The radio towers are located at Mount Wilson, Grand Wash, Mount Perkins, and on the Virgin Mountain, Arizona. The Mount Wilson repeater is the only site located within suitable wilderness on Mount Wilson, Arizona. All other sites are located outside wilderness, and can be accessed without flying over designated or suitable wilderness.

The Grand Wash repeater is located outside the recreation area in the Arizona Strip portion of Grand Canyon Parashant National Monument outside of wilderness. The Mount Perkins repeater is located outside of wilderness in the Black Mountains, Arizona, on Bureau of Land Management administrated lands. The Virgin Mountain repeater is located outside the recreation area, outside of wilderness, near Virgin Peak within Bureau of Land Management administrated lands.

**Rehabilitate North Pipe Springs, Nevada (8 flights during one week of project work)**

North Pipe Springs is located in designated wilderness in a remote portion of the Newberry Mountains, Nevada. This is a priority spring for tamarisk removal and restoration. A helicopter would be utilized to sling load equipment from the staging area to the project area at the onset of the project and to return equipment to the staging area at the completion of the project. Aerial photographic documentation would also occur during the project. The helicopter would be available for medical evacuation if necessary.

**Rehabilitate Dupont and Homestake Mines (Maximum 2 days for each site with 6 hours per day total flight time- 4 days total)**

Dupont mine is located in a remote portion of the Eldorado Mountains, Nevada. Homestake Mine is located in the southern portion of the Nevada side of the park. Both are located outside of designated wilderness areas. These operations could include shuttling materials in and out of the mine sites, but this would not involve wilderness areas. There would be approximately 2 days of flying for each site.

**Wildlife Monitoring**

Burro and Horse Management Activities (6 hours of flight time per day; 4 days per area, with 2 to 4 weeks overall for complete project work in all areas)

Burro management within Lake Mead NRA is authorized under the 1994 Burro Management Plan and Environmental Impact Statement. This alternative includes only the aerial portion of burro management, and does not include any modifications to the existing program within the recreation area. Under this alternative, burro management activities would include aerial helicopter census, capture and removal of burros, and capture and sterilization activities.

The 2004 census operations would occur in the Gold Butte and Muddy Mountains, Nevada, and in the Black Mountains, Arizona. Burros would be located from a helicopter flying grid patterns over relatively flat country and following contours in canyons and more mountainous terrain. The helicopter would fly at 200 to 500 feet above ground level in a predetermined grid in order to maintain a reliable sighting rate and to ensure the statistical accuracy of the population estimate. Flight speed will be 40 to 60 miles per hour (mph). When burros are observed data will be collected on age class. GPS locations will be recorded for each animal, and a line feature will be recorded to document the actual flight pattern.

Censusing would occur between March 1 and April 30, and/or September 1 and December 1, 2004. The Gold Butte census would take 2 to 4 days; the Muddy Mountain census would take 2 to 3 days, and the Black Mountain census would take 2 to 4 days. General censusing from a fixed-wing aircraft could occur within the Arizona Strip portion of the recreation area, and prior to burro removal operations. These flights are generally between 800 to 1,000 feet above ground level and would occur the week before scheduled burro removal activities. These flights generally take several hours over the course of one day.

### *Survey Areas*

The Gold Butte and the adjacent BLM Herd Management Area consists of approximately 270,000 acres. Approximately 20 hours are allotted for the census. The census area would focus on areas where burros are known to occur and would begin in the northern portion of the Gold Butte near Black Ridge, working south towards Lakeside Mine Road (Approved Road 121) then east to Nevada/Arizona border.

The Muddy Mountains and the adjacent BLM Herd Management Area is 42,880 acres. Adjacent areas may also be surveyed, including the Overton Wildlife Management Area. Approximately 12 hours are allotted for the census in this portion of the park. Census work would occur from the west side of the area, in the Bitter Spring Valley, east to Middle Point, and north to the Overton Wildlife Management Area. This area includes designated wilderness.

The Black Mountains and the adjacent BLM Herd Management Area consists of nearly 600,000 acres. Between 20 and 30 hours are allotted for the census. Census operations will begin in the southern portion of the Black Mountains immediately north of the intersection of Interstate 40 near the Colorado River. Flight will be in a standard search grid at ½ mile intervals at approximately 200 feet above ground level and proceed in a northerly direction.

Burro capture and removal activities are based upon burro census and utilization data, or would occur in areas where zero burro use is the recreation area's goal under the approved Burro Management Plan, or where they are posing a nuisance or risk to public safety. In 2004, removals are likely planned for the Gold Butte, Muddy Mountains, and Eldorado Mountains, Nevada; and in the Arizona Strip and Black Mountains, Arizona, including the Grand Wash, Kingman Wash, Temple Bar, and Willow Beach areas.

Generally, burro removal operations utilize low level helicopter operations for herding the animals toward a trap and holding corral. The helicopter would be utilized to search for the burros, flying at approximately 700 feet above ground level for the search period. Once burros are found, a group is herded by the helicopter toward a trap site. While herding, the helicopter is generally flying between 200 feet and 500 feet above ground level. Each day the pilot and helicopter can bring four to five separate groups of burros to the trap site. The search periods can take as little as 30 minutes to as long as 2 hours. Once burros are located, the herding period depends on the distance to the trap. Burros are generally herded no more than 4 miles to a trap site and no faster than 10 miles per hour.

Operations can be completed in as little as several hours, to as long as five days, depending on the weather, the size of the removal area, and the number of burros to be removed. Burro removals are planned for the early spring, between March and April, and in the fall, between October and November.

Horse management activities are conducted in cooperation with the BLM on an as needed basis for trespass horses and when range conditions warrant removals. These operations would

occur in conjunction with burro management activities, and could occur in the Muddy Mountains, Nevada, and around Temple Bar, Arizona.

Desert Bighorn Sheep Management Activities, Nevada (2 months various times)

Under this alternative, the bighorn sheep management activities would include aerial helicopter surveys, affixing telemetry collars for a study, and, if determined appropriate, capture and relocation of selected bighorn sheep. Aerial surveys of bighorn sheep populations would occur within the Eldorado Mountains, Newberry Mountains, Black Mountains, River Mountains, Muddy Mountains, and the Gold Butte region (primarily Iceberg Canyon) of Nevada. Activity would involve approximately 2 to 6 hours of helicopter flight time in each mountain range at low elevations, frequently 200 feet above ground level or lower for the purpose of conducting a routine annual census of desert bighorn sheep populations. Population estimates and demographic data collected would be used to set sustainable harvest quotas and inform managers of current herd conditions and trends. Based on the survey results, some bighorn sheep could be captured and relocated to other areas for transplant purposes. Captures would occur in the Muddy and/or River Mountains.

Table 1. Nevada Sheep Management Locations and Potential Dates

Location	Aerial Survey		Capturing		Loading and Transporting
	<i>Estimated Flight Time</i>	<i>Potential Dates</i>	<i>Estimated Flight Time</i>	<i>Date</i>	
Eldorado Mountains	12 hours	Sept-Nov & Mar-May	Not Applicable		Not Applicable
Muddy Mountains	2 hours	Sept-Nov	6 hours	Oct.	Potential loading and transporting
Black Mountains	6 hours	Sept-Nov	Not Applicable		Not Applicable
Newberry Mountains	4 hours	Sept-Nov	Not Applicable		Not Applicable
Gold Butte	4 hours	Sept-Nov	Not Applicable		Not Applicable
River Mountains	6 hours	Sept-Nov	6 hrs.	Oct.	Potential Loading and transporting

*Purpose of and Specific Activities at Each Location*

Eldorado Mountains Nevada

An aerial helicopter survey would be conducted and would entail approximately 6 hours of flight time at low elevations. The purpose of this survey is to conduct an annual census of desert bighorn sheep populations and to monitor trends of bighorn herds from northeast Boulder City to the Cottonwood Cove area. There would be no landing or ground activity associated with this census.

Additional flights may be needed to monitor habitat use and movements of sheep in the area or to investigate mortality signals from animals marked with telemetry collars. Monitoring will be done primarily by satellite, but two additional 3-hour spring surveys are planned in the Eldorados. The purpose of the monitoring is to assess impacts from highway and bridge

construction activities occurring in the vicinity. This is associated with the six-year study funded by the Federal Highways Administration (FHWA) and was discussed in the *Black Canyon Bridge Environmental Impact Statement*.

#### Muddy Mountains, Nevada

An aerial helicopter survey would be conducted and would entail approximately 2 hours of flight time at low elevations. The purpose of this survey is to conduct an annual census of desert bighorn sheep populations and to monitor trends of bighorn herds from the area east of the Echo Bay access road junction with Northshore Road to Blue Point Spring. There would be no landing or ground activity associated with this census.

Pending the results of the preceding aerial survey, an aerial net gun capture could be initiated in the Muddy Mountains. This would require aircraft landings to secure bighorn prior to transporting to the Echo Bay Airstrip. Sheep captured from the Muddy Mountains would be used as transplant stock in other areas as part of the NDOW's ongoing trapping and transplant program.

#### Black Mountains, Nevada

An aerial helicopter survey would be conducted and would entail approximately 4 hours of flight time at low elevations. The purpose of this survey is to conduct an annual census of desert bighorn sheep populations and to monitor trends of bighorn herds within the Newberry Mountains. There would be no landing or ground activity associated with this census.

#### Newberry Mountains

An aerial helicopter survey would be conducted and would entail approximately 4 hours of flight time at low elevations. The purpose of this survey is to conduct an annual census of desert bighorn sheep populations and to monitor trends of bighorn herds within the Newberry Mountains. There would be no landing or ground activity associated with this census.

#### Gold Butte

An aerial helicopter survey would be conducted and would entail approximately 4 hours of flight time at low elevations. The purpose of this survey is to conduct an annual census of desert bighorn sheep populations and to monitor trends of bighorn herds on the East side of the Overton Arm of Lake Mead. The area where most of the bighorn, and subsequently most of the survey activity on the park, will occur is in the mountains that form Iceberg Canyon. There would be no landing or ground activity associated with this census.

#### River Mountains

An aerial net gun capture may be initiated in the River Mountains. The purpose of this capture would be to provide transplant stock for re-establishing herds in other parts of their range where populations have been reduced or eliminated by human activities.

#### Desert Bighorn Sheep Management Activities, Arizona

This program is similar to the Nevada Desert Bighorn Sheep management program. Operations include aerial censusing, and there is the potential for capture and removal activities. AGFD conducts aerial bighorn sheep surveys approximately 3 to 5 days per year in the Tassi, Grand

Wash, the Cockscomb, and Andrus Canyon areas of Grand Canyon-Parashant NM. In addition, they conduct aerial censusing for approximately 1 to 2 weeks in the Black Mountains and Temple Bar areas, Arizona, during the late summer and fall. The AGFD utilizes low level helicopter flights to conduct these operations.

#### Fish Monitoring Activities (6 flights over 3 month period)

Between January and March, the Native Fish Work Group, including the NPS, BOR, NDOW, AGFD, U.S. Fish and Wildlife Service, and Arizona State University, conduct aerial surveys of the coves along Lake Mohave and Lake Mead to determine the presence of spawning razorback suckers. A Bell 206L-1 helicopter is utilized for these flights. The flights primarily occur outside the wilderness areas and follow the shoreline of the lakes. In the past, flights have reached as far north as Aztec Wash. This year they propose to survey as far north as Chalk Cliffs and as far south as the Princess Cove area.

In the northern section of the surveys, in Black Canyon, the flights could occur over designated wilderness due to the nature of the terrain. Flights generally occur at or below 500 feet above ground level. Lake Mohave flights follow the west shoreline from Hoover Dam south to Davis Dam, then follow the east shoreline north from Davis Dam, searching for groups of spawning fish, or vice versa. Flights take approximately 2 to 3 hours each.

Lake Mead is periodically surveyed for razorback sucker spawning, though not as frequently as Lake Mohave. These flights are generally over the lakes and not within the wilderness units.

#### **Additional Proposed Aerial Operations on the Grand-Canyon Parashant NM portion of Lake Mead NRA**

##### Wildlife Monitoring (2 to 4 days)

AGFD conducts deer surveys approximately 2 to 4 days per year utilizing low level helicopters on the Shivwits portion of the national monument. Deer surveys normally occur annually in early December over Twin Point and the Mt. Dellenbaugh areas. These flights typically utilize a low-level helicopter but could be also utilize a fixed-wing aircraft, depending on available funding.

Aerial patrols utilizing both fixed-wing and helicopters occur over the wildlife water catchments at Paws pocket and Mollies Nipple to monitor wildlife and water conditions.

##### General Resource Monitoring (2 to 3 weeks)

There are occasional overflights scheduled over Ponderosa pine forests to look for evidence of bark beetle infestation. This occurs 1 to 2 days per year.

Wilderness monitoring surveys occur 2 to 3 times per year in fixed-wing aircraft at or above 700 feet, but are generally 800 to 1,000 above ground level.

Surveys to monitor range activities, including overflights to look for trespass cattle, can occur 4 to 5 times per year and generally occur in the Grand Wash and Tassi areas in a fixed-wing aircraft at or above 700 feet, but are generally 800 to 1,000 above ground level.

NPS and BLM law enforcement monitoring flights and orientation flights occur approximately 2 to 3 times per year in fixed-wing aircraft at or above 700 feet, but are generally 800 to 1,000 above ground level.

AGFD law enforcement patrols focus on monitoring hunting and illegal activities (poaching) typically during November and December and deer antler hunting/off-road vehicle travel problems in March.

### **SELECTED ALTERNATIVE**

The National Park Service selected alternative is alternative B, conducting administrative helicopter and fixed-wing flights in 2004. This alternative is the same as that presented in the environmental assessment. The administrative flights for 2004 would accomplish essential patrol functions, including wilderness monitoring; repair and maintain existing radio towers; restoration of North Pipe Springs; wildlife monitoring and removal activities; native fish aerial surveys; and rehabilitation and mine closures at Dupont and Homestake Mines. Alternative B meets the project objectives to provide for visitor and employee health and safety, to protect sensitive resources, to manage wildlife populations, and to monitor, rehabilitate, and preserve wilderness resources set in the context of the laws, regulations, and policies governing park management.

### **ENVIRONMENTALLY PREFERRED ALTERNATIVE**

As noted in the EA, an alternative must meet the following criteria to be considered an “environmentally preferred” alternative:

1. Fulfill the responsibilities of each generation as a trustee of the environment for succeeding generations.
2. Ensure for all Americans safe, healthful, productive, and esthetically and culturally pleasing surroundings.
3. Attain the widest range of beneficial uses of the environment without degradation, risk of health or safety, or other undesirable and unintended consequences.
4. Preserve important historic, cultural, and natural aspects of our national heritage and maintain, whenever possible, an environment that supports diversity and variety of individual choice.
5. Achieve a balance between population and resource use that will permit high standards of living and a wide sharing of life’s amenities.
6. Enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.

Based on the above criteria, the “environmentally preferred” alternative was identified in the EA as the proposed action. Alternative B best realizes criteria 1,2,3,4, 5, and 6. Alternative B would assure for all generations a safe, healthful, and esthetically pleasing surrounding. Bighorn sheep populations are an essential part of the wilderness resource, and their presence is critical to maintaining an unimpaired wilderness character; implementation of bighorn management activities would help preserve important natural aspects of our national heritage and would maintain an environment that supports diversity and variety of individual choice. It



would allow park managers to achieve a balance between population and resource use, and permit high standards of living and a wide sharing of life's amenities. Alternative B fulfills the responsibilities of each generation as trustee of the environment for future generations, it ensures a safe and healthful environment, and attains beneficial uses of the environment without degradation, risk of health or safety, or other undesirable consequences.

Alternative A (no action) represents continuation of the existing condition (no new aerial operations would be permitted to occur over wilderness areas). No fixed-wing patrols would occur over wilderness. Other options for access and the transportation of materials would be considered for each management action under this alternative, including access by foot, horse or other pack animal, boat, or by vehicle where roads are present. However, these options would not allow managers to fully meet all essential survey and monitoring objectives. The no-action alternative does not fully realize criteria 1, 2, 3, 4, 5, and 6.

### **MITIGATION, MONITORING, AND OPERATIONS SAFETY**

Mitigation measures have been incorporated into the selected alternative to minimize, reduce, or eliminate impacts of alternatives and to protect Lake Mead NRA resources and visitors; including mitigation related to aerial operations and use. Monitoring activities have been incorporated into the selected alternative and will be implemented during or following the project. If planned activities, as detailed in the EA, do not accomplish important objectives, additional environmental compliance may subsequently need to be completed.

The following table describes mitigation measures and monitoring activities that will be implemented.

**IMPACT/MITIGATION MATRIX**

<b>Impact Topic</b>	<b>Mitigation Measure</b>	<b>Responsibility</b>
Natural Soundscapes	Flights will occur between one hour after sunrise and one hour before sunset, if possible.	Project Manager and NPS Project Liaison
Visual Resources	<ul style="list-style-type: none"> <li>▪ All helicopter operations, other than those for wildlife and burro censusing and removals, will fly at a minimum of 500 feet above ground level except when landing or taking off, or when delivering supplies on a long-line.</li> <li>▪ Fixed-wing aircraft will fly at a minimum of 700 feet above ground level.</li> </ul>	Project Manager

Impact Topic	Mitigation Measure	Responsibility
Safety	<ul style="list-style-type: none"> <li>▪ A separate job safety analysis will be prepared for all aerial operations. All aerial operations will be conducted in accordance with applicable state and federal laws and policies. Only qualified and trained individuals will be permitted on the aerial operations.</li> <li>▪ A flight manager will be assigned to all aerial operations to insure that conditions are met, safety is observed, and sensitive areas are avoided.</li> <li>▪ For radio tower maintenance activities, only designated helicopter landing areas will be utilized, unless in emergency situations.</li> </ul>	Project Manager and NPS Project Liaison
Wildlife, Wildlife Habitat, and Sensitive Species of Concern	<ul style="list-style-type: none"> <li>▪ Low level aerial operations (below 700 feet above ground level) will not occur during sensitive species breeding seasons, and other times, as recommended by the NPS wildlife biologist. This will include desert bighorn sheep and mule deer. Sensitive areas for these species have been designated and will be avoided during peak breeding times. Low level wildlife and burro census and aerial capture operations will be restricted around these sensitive areas during the peak desert bighorn sheep mating period between July 1 and September 30, and in lambing areas during the lambing period in February and March.</li> <li>▪ Only experienced capture and censusing crews will be utilized for census, capture and removal operations (AGFD, NDOW, BLM, BOR, NPS). Desert bighorn sheep will be blindfolded upon capture to calm them during the transportation and tagging operations.</li> </ul>	Project Manager and NPS Project Liaison

Impact Topic	Mitigation Measure	Responsibility
Visitor Experience and Wilderness Character	<ul style="list-style-type: none"> <li>▪ As much as possible, trap sites will be located outside of wilderness areas, near existing roads and developed areas. Trap sites will be located adjacent to the lake within the non-wilderness area.</li> <li>▪ All trap locations will be located outside designated wilderness in desert washes or previously disturbed areas. As much as possible, operations will be scheduled during periods of low visitor use in wilderness areas.</li> <li>▪ Monitoring activities for wilderness have been funded through the Conservation Initiative of the Southern Nevada Public Lands Management Act and an implementation plan will be developed in the next few months. Monitoring activities will include visitor use and visitation monitoring, resource impact monitoring from visitor use, including trail impacts and impacts from illegal off-road vehicle use, and acoustical monitoring. The monitoring plan for wilderness resources is being developed and will be implemented at a later date. These plans will consist of measures identified and evaluated during the preparation of the EA.</li> <li>▪ Notification of aerial operations over wilderness will be provided to the public through the park web site, press releases, and at the park visitor centers. The base of operations will all be located outside wilderness. All ground support vehicles will be restricted to existing access roads, outside of the designated wilderness.</li> <li>▪ As much as possible, trapping operations will be scheduled during periods of low visitor use in wilderness areas.</li> </ul>	Project Manager, NPS Project Liaison, and NPS Wilderness Coordinator

## ENVIRONMENTAL CONSEQUENCES OF THE SELECTED ALTERNATIVE

### **Wildlife, Wildlife Habitat, and Sensitive Species of Concern**

#### ***Law Enforcement and Maintenance Activities***

Law enforcement patrols: Fixed wing law-enforcement utilizing a single propeller Cessna fixed wing airplane, occur twice weekly and are generally at 800 to 1,000 feet above ground level. If suspicious activities or close inspection warrants, the plane will go no lower than 700 feet above ground level and can circle an individual area for 5 to 20 minutes, depending on the situation. These flights are parkwide, but spend a minimal amount of time over each location. Since they are at a higher altitude, they generally do not disrupt wildlife activities or habitat, and create no to negligible impacts.

Radio tower maintenance: Radio tower maintenance activities would utilize a helicopter to transport personnel and supplies to each radio site, as specified under the preferred alternative. Landing and taking off on site would create the most impact, since flights to and from the site are generally at least 800 feet above ground level. Landing and taking off at sites could temporarily disrupt wildlife in that area through noise disturbance and displacement from habitat. All sites are on or near mountain peaks, and if desert bighorn sheep are present, they avoid landing at the site and find an alternative location to land where disruption would not occur. Therefore, there would be negligible to minor impacts to wildlife from this activity.

#### ***Resource Management Activities***

Rehabilitate North Pipe Springs: Utilizing a helicopter to sling-load supplies would occur for 2 hours each on the first and last days of the project, for a total of four hours. The helicopter would remain on site in case of medical emergency. The sling-load operation would create minor, temporary disturbance to wildlife in and adjacent to the project area from noise and displacement from habitat, primarily when the helicopter takes off and lands.

Rehabilitate Dupont and Homestake Mines: Utilizing a helicopter to sling-load supplies would occur for 4 to 6 hours on the first and last days of the project for each site. The sling-load operation would create minor, temporary disturbance to wildlife in and adjacent to the project area from noise and displacement from habitat, primarily when the helicopter takes off and lands.

Wildlife monitoring and capture operations: Low level flights have the potential to displace and/or disrupt normal behavior patterns of wildlife, such as deer and bighorn sheep. The duration of the flights within each project area varies from 2 to 6 hours. Wildlife in the immediate location of flights and where landing would occur would be disrupted and temporarily displaced to available habitat nearby. Implementation of alternative B would result in localized, short-term, minor adverse impacts since flight response behavior is expected without interference with activities necessary for survival.

Resource management activities would be implemented and information would be available for sound management practices and decision making.

Depending on aerial surveys, individuals from bighorn sheep herds may be captured and transplanted to aid in recovery of bighorn herds elsewhere. Bighorn sheep captures and transplanting would help restore populations to their optimal levels and aid in sustainability and diversity of the herd. Desert bighorn sheep would be directly disturbed if they are captured and tagged, and/or relocated. Mitigation should prevent major impacts to individual sheep. However, there is the possibility that the capture operation or relocation could lead to direct mortality of individual sheep. Desert bighorn sheep management activities would result in long-term beneficial effects to bighorn populations.

#### ***Operations on the Grand Canyon-Parashant NM***

Aerial operations and monitoring activities could temporarily disrupt wildlife in the vicinity of the flights, particularly the low-level helicopter flights utilized for wildlife monitoring. Other monitoring flights are generally at or above 800 feet above ground level, are infrequent, and create temporary, negligible to minor adverse impacts to wildlife species.

#### **Natural Soundscapes**

##### ***Law Enforcement and Maintenance Activities***

Law enforcement patrols: Law enforcement patrols would occur over wilderness areas twice a week, at an elevation of 800 to 1,000 feet above ground level, with occasional flights at 700 feet above ground level if the situation warrants. Depending on the size of extent of the wilderness areas, flights are only over each wilderness area for 15 to 30 minutes at a time, unless there are law enforcement issues in that area, or it is a special wilderness patrol, which could take one to two hours per area. Human generated noise from the fixed-wing Cessna utilized for law enforcement patrols would occur over wilderness areas. Since the flights are primarily at 800 to 1,000 feet above ground level, and are in specific wilderness areas for a short duration, and there is only one aircraft utilized for these purposes, the impact to the natural soundscape would be temporary, adverse, and minor.

Perform radio tower maintenance: One existing NPS radio tower is located within an area considered suitable for wilderness designation, near Mount Wilson. The others are located outside of wilderness and access would also be outside of wilderness. There would be temporary adverse impacts to the natural soundscape in the Mount Wilson area from accessing the radio tower site, and from the noise generated from taking off and landing since that is when the helicopter would be closest to ground level. The natural soundscape impacts would occur two times per year when scheduled radio maintenance is required, in addition to any emergency repairs. Flights also could occur to conduct urgent maintenance activities on an unscheduled basis, but generally about two more times per year. Flights into the Mount Wilson area generally take approximately one hour each way, with 30 minutes of actual flying audible in the wilderness area. The effects of these activities are considered to not diminish wilderness suitability of this area.

##### ***Resource Management Activities***

Rehabilitate North Pipe Springs: Utilizing a helicopter to sling-load supplies would occur for 2 hours on the first and last days of the project (2 days total). The helicopter would remain on site in case of medical emergency, but it would not be in operation unless necessary. It would

be flown from the airport in Bullhead City to the project site daily during project work. The sling-load operation would create minor, temporary disturbance to the natural soundscape in the area, primarily when the helicopter takes off and lands. This would create no more than 5 to 6 hours of disturbance for a four-day period, resulting in minor, temporary disturbances to the natural soundscape in the Bridge Canyon Wilderness Area.

Rehabilitate Dupont and Homestake Mines: Utilizing a helicopter to sling-load supplies would occur for 4 to 6 hours on the first and last days of the project. The sling-load operation would create minor, temporary disturbance to the natural soundscape primarily when the helicopter takes off and lands. Both mine sites are located outside of designated or suitable wilderness.

Wildlife monitoring and capture operations: Low level flights for censusing and capture operations would disrupt the natural soundscape of that particular project area. The duration of the flights within each project area varies from 2 to 6 hours, creating temporary moderate impacts to the soundscape near project activities.

Flights would usually be scheduled during weekdays, and would avoid weekends if possible, and avoid periods of peak visitor use. Landing helicopters to secure and transport bighorn and burros would have temporary minor adverse impacts to the natural soundscapes in the immediate area. Impacts from aircraft noise would result in short-term, minor to moderate, localized, adverse impacts to the natural soundscapes.

The designated and suitable wilderness areas that could be temporarily and indirectly adversely impacted (thus affecting visitor experience) by the aerial operations associated with desert bighorn sheep activities include Jimbilnan, Pinto Valley, Muddy Mountains, Black Canyon, Eldorado, Iretaba Peaks, Nellis, Bridge Canyon, Kingman Wash, Black Mountains, Fire Mountains, and Grand Wash.

The designated and suitable wilderness areas that could be temporarily and indirectly adversely impacted (thus affecting visitor experience) by the aerial operations associated with burro management activities include Muddy Mountains, Pinto Valley, Jimbilnan, Overton, Grand Wash, Bonelli Landing, Black Mountains, Cottonwood Valley, Kingman Wash, and Eldorado Mountains.

Protecting bighorn and managing burros is important for maintaining wildlife values in a condition necessary for preserving wilderness.

#### ***Operations on the Grand Canyon-Parashant NM***

Law enforcement and resource monitoring protocols would occur occasionally throughout the Grand Canyon-Parashant NM.

Aerial operations and monitoring activities could temporarily alter the natural soundscapes in the vicinity of the flights, with the primary adverse impact resulting from low-level helicopter flights utilized for wildlife monitoring. This type of activity would occur infrequently, 2 to 4 days per year, with several hours spent flying over each area.

Wilderness monitoring would occur 2 to 3 times per year. Ponderosa pine monitoring would occur 1 to 2 days per year. Range activity monitoring would occur 4 to 5 days per year. Law enforcement flights would occur 2 to 3 times per year (BLM and NPS) and AGFD law enforcement flights occur generally periodically between November and December to monitor hunting activities. Other monitoring and law enforcement flights would utilize fixed-wing aircraft, are generally at or above 800 feet above ground level, are infrequent, and create temporary, negligible to minor adverse impacts to the natural soundscape.

### **Visual Resources**

In general, the presence and observation of low-flying aircraft could disrupt the wilderness experience for visitors near the project areas. However, such intrusions (if perceived as such) would be rapid and short-term in duration.

#### ***Law Enforcement and Maintenance Activities***

Short-term, negligible impacts to visual resources would occur during aerial law enforcement activities, since law enforcement-related fixed-wing flights would take place at or above 800 feet above ground level, and occur approximately twice per week, in different areas of the park. Radio tower maintenance activities would create short-term negligible impacts to visual resources since they would occur twice per year at each site.

#### ***Resource Management Activities***

Resource management activities such as low-level helicopter use for transporting materials, monitoring, and census and animal removal projects could create temporary minor adverse impacts to the visual resources in the project areas during the period of the operation. The level of adverse impact depends upon the visitor's expectations of vistas in and around the project sites. Impacts would be more noticeable to visitors in wilderness areas, where there are expectations of a pristine visual environment without human influence and objects.

#### ***Operations on the Grand Canyon-Parashant NM***

Monitoring and law enforcement operations on the Grand Canyon-Parashant NM would utilize both fixed-wing airplanes and helicopters. The fixed-wing airplane utilized for law enforcement would generally fly at 800 feet above ground level or higher. Helicopters could fly at lower altitudes depending on the project work. Since these operations would occur only occasionally, for limited periods of time, the impact to the visual resources would be temporary, minor, and adverse.

### **Visitor Experience**

Visitors to wilderness areas generally expect quiet and solitude, devoid of artificial noise and non-natural objects. Much of the visitor experience in wilderness depends upon their expectations of the natural soundscapes and visual resources, as discussed above.

#### ***Law Enforcement and Maintenance Activities***

There could be short-term, adverse, minor impacts to the visitor experience, particularly in wilderness areas, from the presence and sound of airplanes and helicopters. Ongoing maintenance to park radio towers would assure quick law enforcement response and more effective search and rescue operations. Law enforcement flights would allow park rangers to

more effectively determine problem areas and areas where visitor assistance is needed. This would benefit the park visitor.

### ***Resource Management Activities***

During project flights, visitors near the project area would be impacted from sound and visual intrusions. This would result in short-term, adverse impacts to visitor experience in a wilderness area. Visitors would be impacted as little as a few minutes, or as much as 6 hours at a time for several days, depending on where they are and the schedule of the management activities. Visitors could experience beneficial impacts in the long-term from the successful implementation of resource management and visitor protection activities. Restoring the wilderness to natural conditions, and maintaining native wildlife populations, can improve the visitor experience. Closing and rehabilitating mine sites could reduce visitor hazards and improve search and rescue operations.

### ***Operations on the Grand Canyon-Parashant NM***

There would be short-term, minor, adverse impacts to visitors in wilderness areas on the monument due to the noise and presence of airplanes and helicopters. This would occur infrequently during monitoring and law enforcement activities. However, the visitor could benefit from law enforcement flights if they require assistance. Visitors could benefit from resource management activities as they would assure the wilderness resource is preserved and protected, and wildlife populations are maintained.

### **Safety**

As with any aerial operation, there are inherent risks involved to participants. Mitigation measures and compliance with required policies serve to reduce the risks. However, the risks can not completely be eliminated. Therefore, there is the potential for injury and loss of human life during these operations. If this occurs, severe, irreversible adverse impacts would result to individuals involved in project work. Beneficial impacts to visitors and employees would result from improved safety conditions from mine closures and monitoring, law enforcement patrols, and communications from the maintenance and emergency repairs to park radio towers.

### **Wilderness**

Wilderness impacts are associated with biophysical and experiential effects. Biophysical effects include the ecological health of the area, including wildlife. Experiential effects include opportunities for solitude, natural quiet, self-reliance and discovery. Natural quiet was addressed previously under “Soundscapes” and solitude was addressed under “Visitor Experience.” Consistent with the 1964 Wilderness Act, the proposed management activities in designated wilderness areas are the minimum required and necessary for the administration of the NRA and are deemed to be essential for protecting the resources involved.

### ***Law Enforcement and Maintenance Activities***

Law enforcement activities using fixed-wing aircraft at approximately 800 to 1,000 feet above ground level may temporarily detract from the experiential effects within wilderness areas during the period when the aircraft is flying above the wilderness area. This would create short-term minor adverse impacts to the wilderness resource. It could impact any wilderness area on any given day within the recreation area because law enforcement patrols occur on a



parkwide basis and patrol areas change periodically. Generally patrols are only over selected areas for minutes at a time unless there is a law enforcement issue in the area, in which case the plane could circle the area for a period of 15 to 30 minutes or longer. Special wilderness patrols could take one to two hours per wilderness area.

Visitors to the Mount Wilson wilderness area (NPS) may be disturbed by helicopter use twice a year for scheduled radio tower and repeater maintenance, and possibly additional times if emergency maintenance is required. Flights into the Mount Wilson area generally take approximately one hour each way, with 30 minutes of actual flying in the wilderness area. There would be short-term, minor adverse impacts to the experiential wilderness resources.

#### ***Resource Management Activities***

Allowing appropriate resource management activities within wilderness would preserve the ecological health of the bighorn sheep herd and restore the natural processes within Lake Mead NRA. These are important resources related to the preservation of the character of wilderness areas within Lake Mead.

Rehabilitate North Pipe Springs: Utilizing a helicopter to sling-load supplies would occur for 2 hours on the first and last days of the project (2 days total). The helicopter would remain on site, staged outside of the wilderness area, in case of medical emergency, but it would not be in operation unless necessary. It would be flown daily during the project work from the airport in Bullhead City to the project site. The sling-load operation would create minor, temporary disturbance to the wilderness resources in the area, primarily when the helicopter takes off and lands. This would create no more than 5 to 6 hours of disturbance for a four-day period, resulting in minor, temporary disturbances to the Bridge Canyon Wilderness Area.

Rehabilitate Dupont and Homestake Mines: Both mine sites are located outside of designated or suitable wilderness so there would be no impact to wilderness under this alternative.

Wildlife monitoring and capture operations: Landing helicopters to secure and transport bighorn and burros, supplies, and personnel would have temporary minor adverse impacts to the wilderness resource in the immediate area. Impacts from aircraft noise would result in short-term, minor to moderate, localized, adverse impacts to the wilderness resource.

Project operations using low level helicopters, such as monitoring, censusing, and capturing and removing animals, could create temporary, minor to moderate, adverse impacts to the wilderness experiential resource in the selected project areas. The duration of the flights within each project area varies from 2 to 6 hours, creating temporary moderate impacts to the wilderness resource near project activities.

Visitors to the following designated and suitable wilderness areas could be temporarily adversely impacted by the aerial operations associated with desert bighorn sheep activities include Jimbilnan, Pinto Valley, Muddy Mountains, Black Canyon, Eldorado, Iretaba Peaks, Nellis, Bridge Canyon, Kingman Wash, Black Mountains, Fire Mountains, and Grand Wash.

Visitors to the following designated and suitable wilderness areas could be temporarily and adversely impacted by the aerial operations associated with burro management activities include Muddy Mountains, Pinto Valley, Jimbilnan, Overton, Grand Wash, Bonelli Landing, Black Mountains, Cottonwood Valley, Kingman Wash, and Eldorado Mountains.

#### ***Operations on the Grand Canyon-Parashant NM***

Law enforcement and resource monitoring patrols would occur occasionally throughout the Grand Canyon-Parashant NM.

Aerial operations and monitoring activities could temporarily alter the wilderness resource in the vicinity of the flights, with the primary adverse impact resulting from low-level helicopter flights utilized for wildlife monitoring. This type of activity would occur infrequently, 2 to 4 days per year, with several hours spent flying over each area.

Wilderness monitoring would occur 2 to 3 times per year. Ponderosa pine monitoring would occur 1 to 2 days per year. Range activity monitoring would occur 4 to 5 days per year. Law enforcement flights would occur 2 to 3 times per year (BLM and NPS) and AGFD law enforcement flights would occur generally periodically between November and December to monitor hunting activities. Other monitoring and law enforcement flights would utilize fixed-wing aircraft, are generally at or above 800 feet above ground level, are infrequent, and create temporary, negligible to minor adverse impacts to the natural soundscape.

Allowing appropriate resource management activities within wilderness would preserve the ecological health of the region and help to restore the natural processes within Grand Canyon-Parashant NM. These are important resources related to the preservation of the character of wilderness areas.

#### **Cumulative Impacts**

The impacts of the proposed aerial operations to wildlife, wildlife habitat, species of special concern, natural soundscapes, visual resources, visitor experience, and wilderness character, are temporary and short-term in nature. When considered with other existing and potential future aerial activities that can be reasonably foreseen (private, air tours, commercial flights, and military operations), the proposed minimal aerial operations would not result in significant additional cumulative adverse impacts.

#### **PUBLIC INVOLVEMENT AND CONSULTATION**

Staff of Lake Mead NRA and resource professionals from Grand Canyon-Parashant National Monument and the NPS Natural Sounds Program conducted internal scoping. This interdisciplinary process defined the purpose and need, identified potential actions to address the need, determined the likely issues and impact topics, and identified the relationship of the proposal to other planning and management at the NRA. A press release initiating scoping and describing the proposal was issued December 2, 2003, and comments were solicited through January 2, 2004. No comments were received. In addition, the NPS consulted with tribal groups and coordinated with the BLM.

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The environmental assessment was made available for public and agency review and comment during a 30-day period ending March 3, 2004. One hundred seventy-three letters announcing the availability of the document were mailed to individuals, businesses, and organizations on the recreation area's mailing list, and 75 of these parties received a copy of the EA. The document was provided to area libraries and was available for review on the park Web site, or interested parties could contact the park by phone or mail and request copies of the document.

Written comments were received from two agencies and one individual (a member of the Nevada Group of the Sierra Club). NDOW supported the proposal. AGFD felt some of the mitigation would inhibit their ability to manage bighorn herds. However, the mitigation in question is designed to reduce impacts as much as possible, and is derived from past practices and will not preclude any of the agency's essential activities. The NPS believes that the selected alternative will allow AGFD to fully fulfill their mission and will provide a response letter addressing their comments. The individual questioned the use of aircraft for certain activities and was unaware that aircraft are currently being used to perform these activities. A response letter will be sent, explaining that these operations have been ongoing, and that as addressed in the EA aircraft were deemed to be the minimum tool necessary to accomplish the essential operations which were proposed.

## **DECISION RATIONALE**

The impacts of the selected alternative to natural soundscapes, visual resources, wildlife, and visitor experiences are occasional and temporary. Although the use of helicopters and fixed-wing aircraft can cause disturbance to the aforementioned resources, these disturbances last for a short time only and do not cause any enduring effects once the aircraft have left the area. As noted in the EA, only some of the operations considered will occur in or near wilderness, and all of the operations are reduced as much as possible. The legislation which established the subject wilderness areas called for continuation of such critical management activities. Further, the minimal level of the activities associated with use of the aircraft is essential for protecting and enhancing the wilderness character of those areas. In addition, due to the critical nature and time-sensitive objectives of the necessary activities and the remoteness of the areas involved, aerial operations are viewed as the minimum tool capable of accomplishing the proposed actions (both in backcountry and wilderness). For these reasons, the NPS concludes that the selected alternative is appropriate for accomplishing the expressed purpose and need for federal action.

## **IMPAIRMENT OF PARK RESOURCES OR VALUES**

The effects of the proposed operations will not impair park resources or values necessary to fulfill specific purposes identified in the park's enabling legislation. Impacts documented in the environmental assessment and summarized above will not affect resources or values key to the natural and cultural integrity of the park or alter opportunities for the enjoyment of the park. The proposed action will not impair park resources and will not violate the National Park Service Organic Act. This conclusion is based on a thorough analysis of the impacts described in the environmental assessment, and reflects the professional judgment of the decision-maker in accordance with *National Park Service Management Policies*, 2001.

## CONCLUSION AND BASIS FOR DETERMINATION

Based on the analysis completed in the environmental assessment, the capability of the mitigation measures to reduce, avoid, or eliminate impacts, and with due consideration of public response, the National Park Service determined that the selected alternative does not constitute an action that normally requires the preparation of an environmental impact statement.

The selected alternative does not constitute a major federal action significantly affecting the quality of the human environment. The selected alternative would provide for visitor and employee health and safety, protect sensitive resources, manage wildlife populations, and monitor, rehabilitate, and preserve wilderness resources set in the context of the laws, regulations, and policies governing park management. There are no significant impacts on wildlife, wildlife habitat, soundscapes, visual resources, visitor experience, safety and park operations, or wilderness.

There are no highly uncertain or controversial impacts, unique or unknown risks, significant cumulative effects, or elements of precedence identified. Implementation of the action would not violate any federal, state, or local environmental protection law. Therefore, in accordance with the National Environmental Policy Act of 1969, and regulations of the Council on Environmental Quality (40 CFR 1508.9), an environmental impact statement will not be prepared for this project and the selected action may be implemented as soon as practical.

Recommended:

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William K. Dickinson  
Superintendent, Lake Mead National Recreation Area

Date

Approved:

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Jonathan B. Jarvis  
Regional Director, Pacific West Region

Date